JOURNAL OF THE

Amateur Photographic Society of Madras.

April, 1896.

Vol. 2.—No. 5.

Price As. 8.

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EDITORIAL NOTES.

CONSIDERABLE interest is still manifested not only in photographic circles, but also in other scientific spheres, in Prof. Röntgen's discovery, which despite other startling attractions continues to be the sensation of the day. The home journals arriving by each mail are full of the subject. The way in which Professor Röntgen made the discovery, the claims of others who came very near doing so, the purposes to which the method has been applied and the things which have been accomplished by it, variations of the original process, the record of similar effects from other sources, all these and more are fully described and discussed. While scientists are investigating the nature of the force which has been revealed, medical men are testing its value in surgical practice. Although a few instances have been recorded in which the position of a needle or a bullet embedded in the foot or in the hand has been determined, when other means had failed, the employment of this method of 'diagnosis' is still much restricted in many ways, and eager workers are endeavouring to remove these difficulties. The ordinary reader, however, cannot but feel embarrassed by the prognostications of journals which ought to know better. We refer to the strange notions which the non-photographic public has evidently swallowed with regard to the possibilities of this new method. For instance, it is seriously imagined in some quarters that hand-camera photographs of one's skeleton can be taken with the facility of a snap shot; indeed we have even seen a paragraph recommending the wares of certain manufacturers as camera proof and necessary for protection against the inquisitiveness of the hand-cameraist. The most up-to-date thing is reported fr[illegible] America. There, an observer has, it is said, sto[illegible] a march by the invention of a process which has enabled him to photograph the brain. The interviewer has of course been at him, and although not yet prepared to explain his process in detail, he is reported to have said that the "whole internal chamber of the brain is illuminated at the time of photographing." The brain, as usually constituted, is a solid organ; and this new process would therefore, according to the reporter, be able to afford demonstrative proof of the existence or otherwise of a "whole internal chamber" within that organ. The discoverer would seem to have been most fortunate in meeting with a suitable subject so early in the course of his experiments.

WHILE the whole subject is passing through this initial stage, with the serious philosopher at one end of it and the unscrupulous or the ignorant advertiser at the other end,

and the every-day photographer is wondering what it is all going to bring forth, a suitable term by which to designate the process is wanted. The journals have almost unanimously dubbed it the "New Photography." Mr. H. P. Robinson humorously objects that this term is a piracy, for, says he, only recently sandwich-men walked up and down Piccadilly with the words 'New Photography' writ large in connection with the Salon. Captain Abney suggests "Electrography," and the following are a few more which have been suggested: Shadowgraphy, Electro-Photography, Sciography, Radiography, Penetraliography.

THE future development of the subject is foreshadowed by the remarkable announcement that an Italian Professor has succeeded in devising a means of enabling the eye to see through objects which the Röntgen rays penetrate. An attitude of open-mindedness is desirable in regard to such a remarkable revelation. In the meantime, the following description, taken from the *Amateur Photographer*, of the apparatus by which Professor Salvioni applies the new rays to the human eye may interest our readers: "It consists of a tube of black cardboard, one end of which is closed by a disc of the same material, on which is a material fluorescent to the Röntgen rays. At the other end is a lens which permits this surface to be plainly seen. The object to be observed is placed under the luminous rays of a Crookes tube, and it is then examined through Professor Salvioni's cryptoscope. Those portions of the object which are not permeable to the Röntgen rays are projected in shadow upon the fluorescent disc, and thus the bones of the hand, a piece of money held in the closed fist, and other hidden bodies have been distinctly visible to those looking through the cryptoscope."

WE read of an entertainment organised by the Electrophone Company, in which the guests seated in the Company's offices listened to a lecture being delivered several miles away and seeing the same pictures which were being shown at the distant lecture. This was accomplished by means of a duplicate set of slides which were changed at the same moment in both places, the lecture being transmitted by electrophone to a receiver placed against the ear of each of the audience.

FEATS of the above nature are eclipsed by an apparatus for projecting upon a screen photographs of objects in motion. Hitherto all pictorial art has fallen short of reproducing a moving object in motion. Scenes of life and of movement have been depicted, photographically and by the brush; but the reproduction of a street scene, for example, with the vehicles and men all as seen in actual motion has been considered well nigh impossible. At an exhibition recently given in London of the "Cinematograph," an apparatus invented by Messrs. Lumiere, photographs were projected on a screen so as to form moving animated life-size pictures. It promises to be the sensation of the lantern season at home. It is an apparatus similar to the Kinetescope, except that instead of the picture being very small and seen by peeping into a box, after placing a penny in the slot, you pay a shilling and view the enlarged pictures projected upon a screen while you lounge comfortably upon a seat. Here is a description of what was shown at the Marlborough Gallery, Regent Street:—

"First of all you are shown a factory. The gates open. Then the girls pour out, laughing and (apparently) talking. Then a boy comes out, jumps on a bicycle, and rides off. Suddenly a pair of doors are thrown back, the crowd opens, and a brougham is driven out, and so on. Then you are shown a railway station; a train is seen in the distance. It comes nearer and nearer. You see the steam from the funnel and valves, and you can almost imagine you hear the puffing of the engine. The train

comes to a stand, the passengers jump out, and the whole platform is full of life and activity. Porters rush up and down, the guard bangs the doors, and the arrivals are greeted by their friends. Then the scene changes to a garden. The gardener has a hose in his hands. He turns the cock and you see the spray as it leaves the hose flying all over the trees and shrubs. Then there comes a little comic relief. Somebody comes behind the gardener, tilts up the hose, and sends the water into his face, blowing his hat off. After this comes a picture of three men playing at cards outside an inn, and a waiter approaches with a bottle of wine, which is poured out and drunk. The men are smoking, and whiffs of smoke from their cigarettes are seen in the air curling round their heads. They shuffle and deal the cards, the stakes are paid over, the loser looks glum, and the winner slaps him on the back. But the most extraordinary and remarkable scene is the last. You are apparently looking at the sea. The long rollers come tumbling in. A party of bathers run along the springboard and take headers. The waves dash against the rocks, the foam flies up in the air, and you expect every moment to see the water pouring into the hall."

Now, all these were photographed scenes from real life. Let us consider for a moment the principle on which these scenes were reproduced so that the audience could see the various scenes as they actually occurred. The glowing end of a lighted splinter of wood moved round and round produces the impression of a circle of fire and the same sort of illusion occurs in the case of the Catherine-wheel and other fireworks. A card, with a horse painted on one side and the rider on the other, when twirled round gives the impression of a single image. These phenomena are due to the fact that the image of an object formed upon the retina of the eye persists for an appreciable interval of time after the object has disappeared. The two separate images of the horse and the rider for instance are presented to the retina in such rapid succession that the image of the one is superposed upon the persistent image of the other alternately and the two images coalesce. Photographs are taken on a film about 50 feet long and $1\frac{1}{4}$ inches wide at the rate of about 15 per second—that is, 900 photographs per minute—so that every aspect of a scene is registered. The resulting negatives are printed on a similar strip of film, and the positive transparencies are projected on a screen at the same rate of movement. In this way the movement which was originally decomposed is reconstituted by rapid passage of the pictures before the observer's eye. The effect is stated to be wonderful, although there are still some defects in it: a certain amount of vibration in the moving picture and a flicker which is so marked a defect of the kinetescope. In time these will no doubt be remedied. Already a more perfect instrument has been put on the market, giving, it is said, much steadier effects than those of Messrs. Lumiere's apparatus. This is the instrument of Mr. Birt Acres shown to the Royal Photographic Society. One of the most successful things shown through thi[s] instrument is said to be a reproduction of a number of breaking waves, which may be seen to roll in from the sea, curl over against a jetty, and break into clouds of snowy spray that seemed to start out from the screen. The motion of the waves was so realistic that one felt, it is said, an inclination to step backward to avoid getting wet.

ALL these marvels, however, are almost thrown into the shade by the claim put forward by Mr. Ingles Rogers that the problem of photographing thought has really been solved by him. His experiments were briefly described in a recent issue of *Nature*. Mr. Rogers after looking at a shilling piece for a minute turned and fixed his gaze upon a sensitive plate, having excluded some of the daylight from the room by a yellow screen. He looked intently at this plate for forty-three minutes, keeping in his mind the appearance of the coin and nothing

else. In his second experiment, performed in the presence of three other persons, he substituted a postage stamp for the shilling piece, gazing at the plate for only twenty minutes. The plates when developed showed that the pictures formed on the retina of the living eye can be photographed upon the sensitive plate after the object which formed the picture has been removed from view. The discovery *if true* suggests possibilities in physiology and photography of the highest importance. An American journal waggishly remarks "It would be a great convenience if one could just look at a postage-stamp and then photograph it on an outgoing letter." Up to this stage Mr. Rogers' experiments went to show that "retinal photography" might be possible. But since then he has extended his observations to the "psychical side" of the subject and claims to have solved the problem of photographing thought itself. In his first experiment in this direction he endeavoured to reproduce the recalled image of a geometrical figure that he had drawn upon a black-board after allowing other objects to take its place on the retina. He had no difficulty in recalling the figure, which was an equilateral triangle, and in fixing his thoughts upon it and gazing intently at the plate for twenty minutes. The result however was fog, without the triangle, and he gave up all ideas of pursuing the subject, when Professor Röntgen's discovery, he says, gave him the needed impetus. He determined to try to project his thought upon a sensitive plate through a vacuum, upon the assumption that the vibrations emitted from the retina would more readily be able to impress the plate than when allowed to pass through air before falling upon the plate. Mr. Rogers goes into some explanations as to his views on the subject which we need not stop to consider. We only wish to place the facts, which he has recorded, before our readers. He constructed a small box, one with air-tight joints but no bottom, and coated dead black within. The front of it was pierced with two holes $2\frac{1}{2}$ inches apart, behind these holes he cemented plate glass, and at the back of the box he fixed clips for holding the plate in position. After putting in the plate, he placed the box on the receiver of an air-pump and exhausted the air. He then repeated the triangle experiment, gazing at the figure for a minute, then allowing other objects to intervene for some minutes, and then gazing for fifteen minutes at the plate through the eye holes of the vacuous box. On developing the plate there were two undefinable halos across its centre, showing that the plate had been effected. He determined now to make a bold stroke in the way of proving beyond all doubt that the emanations actually originated in thought. For this crowning test he chose a subject which was vividly impressed upon his memory and one that he could recall in detail with great ease. It was the loss of a child of his, which was discovered dead in its bed. No portrait of the child existed, but he could at any moment recall the features of that dead child. Taking up his position in front of the "camera," he closed his eyes for a few moments and, after recalling the image that he wished to reproduce, then gazed upon the plate. Development brought out two small patches of light on the plate, an enlargement of which is figured in the *Amateur Photographer* of February 28 last, showing the faint impression of what looks like a baby's face. Mr. Rogers warns those who contemplate repeating these experiments that "the amount of mind, energy, and brain stress "required to bring about results similar to my "own is so great as to be dangerous."

Free Lance, the writer of "Things in General" in the *British Journal of Photography*, challenges the genuineness of these eye prints and predicts that Mr. Ingles Rogers will not be heard of again.

TO turn to ordinary work-a-day subjects. In Wilson's Photographic Magazine is reprinted (from the *Photo-Rundschau*) a brief article

entitled "No more Yellow Discoloration; No more Green Fog," by E. Höfinghoff. The writer recommends as a preventive of these troubles the thorough washing of the plate after developing and before fixing. Five minutes' soaking in clean water, after a rinse under the tap, is sufficient to remove all traces of the developer; and plates which with ordinary treatment become discoloured remain clear when so washed. The writer of the article states that he would be interested to receive reports from those who are troubled with yellowness and fog and who give this plan a trial. For our own part we can confirm the results claimed for this simple but effective method of avoiding discoloration. The practice recommended is one which we have adopted for many years past with much satisfaction. The writer of the article explains that where traces of the developer still remain in the film, a complete fixing out of the bromide of silver which had not been affected by light, is impossible, and this it is which gives rise to the formation of discoloration and green fog. Thorough washing between developing and fixing is the cure.

THE question as to whether a developed gelatino-bromide plate loses density during fixation has been one upon which various experimenters arrived at opposite conclusions, some maintaining that metallic silver was soluble in sodium hyposulphite, others holding a contrary opinion. Messrs. Haddon and Grundy had turned their attention to the subject and have now published the results of their valuable experiments. Without going into the details of their method, we may state that their conclusions are that under the usual conditions of fixation no metallic silver is dissolved and that the density of the image is not altered. By continuing fixation for twenty-one hours the light-stopping properties became greatly diminished, the reduction of density being such as to give on printing, in one second, a tint which required six seconds with the original plate.

WE regret that, in our description of the illustration which accompanied the last issue of the journal, we inadvertently omitted to mention that the print was from a negative taken by our worthy Honorary Treasurer, Mr. Lynn. With an interesting subject before him, he was not to be put off by the want of his tripod stand, a contingency which would have sorely tried the ingenuity and temper of any ordinary individual and might also have meant sudden death to the chokrah who "packing master things only." Mr Lynn has no doubt learnt a useful lesson from his experience, and we congratulate ourselves on having had the opportunity of reproducing so good a picture of an interesting portion of a god's acre in Southern India. The moral for others is: before you start on a photographic tour, see that the "curtain poles of the camp cot" (we mean of cou[r]se the legs of the camera stand) are inclu[ded] among the "sahman."

OWING to the journal having gone to pr[ess] we were unable to notice in our last issu[e] the Lantern Exhibition which was given by the Society. It was in all respects the most successful thing of the kind that had been attempted in Madras, and the Society's thanks are due to the Honorary Secretary, Mr. Ellison, who spared no pains to ensure the success of the entertainment. It took the form of a farewell to our late Governor, Lord Wenlock, who had during his règime been the senior Patron of the Society. The Society was fortunate in securing the New Theatre, from the stage of which the pictures were shown upon a 20-foot screen.

The first thing that struck the visitor on arrival was the absence of the lights and the glare of a theatrical performance. The Committee members had thoughtfully stationed themselves at the door step in order to assure nervous ladies that they were not entering the Society's dark room. Having arrived within the hall, lit only by the dim mysterious light of

the illuminated disc upon the huge screen, the wary guest began to enquire "what are they going to do?" It had somehow got about that Mr. Thurston was going to show anthropometrical experiments, and we heard it whispered that he would give the demonstration by shadow pantomime, but many were the regrets that he was too shy that night to show how to measure the nasal index. He was indefatigable however in other ways. The lantern was a lime-light one, in which petroleum gas and oxygen were burnt through a mixed jet. This part of the entertainment was entirely under the personal management of Mr. Stevenson, of the Madras Photographic Stores, whose judicious manipulation of the light helped to show the projected transparencies to advantage. The first half of the show consisted of a series of Mr. Dunsterville's slid[illegible]s (many of which were well known to our [illegible]mbers), followed by a series by Surgeon-[illegible]jor VanGeyzel. After some music and re[illegible]eshments, which were served out of doors, the [illegible]cond part of the programme was gone through, [illegible]en Mr. Stevenson showed several of his [illegible] slides as well as some by Messrs. E. W. Stoney and H. C. R. Harley. It was a most effective way of showing the work done by some of the members of the Society, and Mr. Stevenson's contribution also will be remembered by those who had the pleasure of being present on the occasion. There were also stereoscopic transparencies on view, contributed by Mr. Dunsterville and Surgeon-Major VanGeyzel, and these helped to entertain guests who sought the cool of the verandahs in the intervals. Altogether, over 200 slides were put through the lantern in the course of the evening, and what with music supplied by the Governor's Band and refreshments to boot, the evening was pronounced to be one of the most enjoyable.

OUR illustration in the present issue is a print from a negative by Veterinary-Colonel W. S. Adams. It represents an important act, regularly performed, in all large military cantonments, one by which most of our readers probably regulate the various acts which make up the routine of the long long Indian day; for, who does not take stock of the recent past and make plans for the immediate future, who does not look at his ticker, at "Gun-fire"? Colonel Adams writes:—"The plate used was an Ilford "Ordinary," and the exposure given was about $\frac{1}{80}$ sec. with a Thornton Pickard Shutter. It was developed with weak pyro., and development was completed in quarter of an hour. It was my first and only attempt at such a subject"; and our readers will agree with us that another attempt is needless.

THE writer of the London Letter of the *Journal of the Photographic Society of India* for December devotes some three-quarters of a column to what he evidently considers a most valuable discovery, *viz.*, that the simplest way to fit up a camera for pin-hole photography is to unscrew the lenses from the tube and use a diaphragm with a pin-hole. This method is of course not new. It has probably been employed by hundreds of photographers and it was shown at a meeting of our Society in April 1891 when Mr. Michie Smith gave a short address on "Pin-hole Photography." As our *Journal* did not exist then, it may be not amiss to call attention to the chief points that were brought forward in the address. The subject had then recently been dealt with exhaustively by Lord Rayleigh, who had shown that the size of the pin-hole used was of considerable importance. The best size depends on the distance of the plate from the pin-hole which we may call the focal distance (though there is no focus in the ordinary sense of the term) and is given by the formula

$$d^2 = \frac{6f}{100,000}$$

where d is the diameter of the pin-hole and f the focal distance, both measured in inches.

Hence we have the following values—

$f = 10$ inches $d = 0{\cdot}025$ inch.
$f = 12$,, $d = 0{\cdot}027$,,
$f = 7$ feet $d = 0{\cdot}071$,,

When the hole is thus properly proportioned very excellent photographs can be obtained. The chief drawback of course is the length of exposure required. Thus, for a 10-inch focus the aperture being $\frac{1}{40}$ inch it is nearly equivalent to using a stop of $\frac{1}{400}$ and hence the exposure would be nearly forty times as great as for a lens with a stop of $\frac{f}{64}$. The pin-hole has no advantage over the lens for short focal distances, but in some cases with long focal distances—say upwards of 7 feet—there are certain advantages.

Those who wish to study the theory of the subject should consult the paper by Lord Rayleigh in the *Philosophical Magazine*, Vol. XXXI, p. 87.

WE regret to be obliged to go to press without the usual Home Letter, which has unfortunately missed the mail or miscarried.

PROCEEDINGS OF THE SOCIETY.

Monthly Meeting, held at the Masonic Hall, Mount Road.

Tuesday, March 31st, 1896.

Mr. F. Dunsterville, President, *in the chair.*

The minutes of the previous meeting having been circulated to members, in the last issue of the Journal, were taken as read and were confirmed.

The Honorary Secretary communicated the following :—

(1) A notice of offers of eight cash prizes, by the "Youths' Companion, Boston," for the best Amateur Photographs submitted before July 1st, 1896. First prize 100 dollars.

(2) Letter from Messrs. Thornton-Pickard Company forwarding one of their new illustrated catalogues for the use of members.

(3) New illustrated catalogue from Messrs. Ross and Co. of optical apparatus manufactured and supplied by them.

(4) New illustrated catalogue for 1896 from Babajee Sakharam and Co., of Bombay. A new feature of this catalogue, and a useful one too, is the addition of working formulæ for the plates and printing papers advertised therein. Resolved to place these catalogues in the library for reference by any members wishing to see them.

NEW MEMBER.

Surgeon-Major VanGeyzel proposed, and Mr. H. R. N. Ellison seconded, Mrs. J. W. A. McNair, and she was duly elected to be a member of the Society.

THE QUESTION BOX.

I find that some packets of P. O. P. show yellow margins when toned in the sulpho-cyanide bath, but not when toned with borax. How is this to be explained and obviated ?

The President thought that the paper in this case must have been stale, and the simplest way to avoid the difficulty was not to use the sulpho-cyanide toning bath. He had given it up himself for many reasons, and found that satisfactory results were obtained by toning with acetate of soda and gold.

PICTURE.

There was a large show of photographs, many of them excellent as regards composition and tone.

Mr. Oakes exhibited two 'copies' of pictures, the original of one in black and white and the other in color. The latter was toned to a sepia and was a very satisfactory reproduction. This copy, he said, was not taken on an orthochromatic plate, but on a W & W's Instantaneous, in a verandah with side light; using stop $f/120$, he gave an exposure of 3 seconds. Mr. Oakes also showed several other prints : Backwater at Ferok, a Nair family, two views of the Vellore Fort, an interior in the Vellore Temple ; also some very good hand-camera shots and a flash-light photograph.

Mr. Michie Smith showed two prints and two negatives, one of a building and the other of a group. Surgeon-Major VanGeyzel showed prints in platinum : A group of children in a hayfield, a view on the Adayar, and twilight on the Salhouse Broad.

Mrs. Sewell sent a print in bromide of Potters at Work ; and Miss Speechley sent prints of the Temple at Nanjengode, the Durbar Hall at Mysore, and the Mysore Palace.

H.H. The Elayah Rajah of Travancore sent a print of a view on the Travancore Canal; and Mr. Higginbotham a print in platino-bromide of a hand-camera photograph of the Trichinopoly Rock.

Mr. Madge showed a number of excellent prints on Solio paper of Conjeeveram Temple, a building, a group, a landscape view of the Lake in the People's Park, a snap shot of the Madras Harbour during the Marine Regatta.

Next Meeting.

The Picture Subject was left open, so that members might again send any pictures that they like. It is hoped that even a larger number of exhibits will be forthcoming for next meeting than were shown at the last. There are many members who are still suffering from "shyness" and we hope that they will overcome their feelings and send their work for inspection and comparison. Members wishing for information, or criticism of their pictures, will be supplied with the same through the journal, or privately, on addressing the Honorary Secretary.

Miscellaneous Exhibits.

Mr. J. H. Cook showed several prints in two colours, brown and blue. He explained that they were combination Salt and Cyano prints. They were made by first masking those portions of the negative which he wished to print in blue, and taking a print on salted paper. In order to make the mask, he first took a salt print of the unmasked negative and having cut out the required parts from the print he pasted this on the back of the negative. The salt print from the masked negative was washed and fixed in the usual way. After the print was quite dry the Cyanotype sensitising solution, described in February's issue of the Journal, was brushed over the unprinted parts, the mask having been removed from the negative, a second exposure was made. The parts already printed and fixed by the salt process remain unaffected, while the parts sensitised for blue are printing. The print was then washed and dried as usual, the result being a combination print in brown and blue. The formula for the salt prints on ordinary paper which he used was:—

Sodium Chloride	...	...	150 grains
Ammonium Chloride	...	...	100 grains
Bichromate of Potash	...	...	4 grains
Water	...	...	20 ounces

The paper is soaked in the above solution for a few minutes and when dry it is sensitised by floating it in on a solution of—

Silver Nitrate	...	...	50 grains
Citric Acid	...	...	25 grains
Distilled Water	...	...	1 ounce

The formula for Cyanotype was given in February's Journal.

Mr. C. Michie Smith showed the excellent specimens of cloud photography done by S. Manucci of the Vatican Observatory. They were illustrative of types of clouds and showed the admirable results which had been attained by the Italian observer. Our knowledge of the physical and structural process of cloud formation is still in a progressive stage, and photography of cloud forms is one of the means through which a final classification, if that be possible, can be reached. The photographer in this country can contribute much to the study of clouds, and the difficulties in the matter are not very great. When cloud masses are passing before the sun, interesting effects are quite easily obtained in the ordinary way; it is only when the illumination is different and the blue background of the sky acts as much upon the ordinary photographic plate (which is most sensitive to blue rays) as the white clouds, that the latter are rendered indistinguishable upon the negative. Under these circumstances the ordinary method becomes useless especially for cirrus clouds; but these are the very clouds whose forms and movements are closely connected with changes of weather and hence their study is the most interesting. Several methods have been proposed for overcoming the difficulties associated with the photography of these distant clouds, such as photographing from the summits of high mountains, using a very small stop and giving a very short exposure and subsequently intensifying the faint image obtained, employing polarised light. While these methods may not be within the reach of every one, by far the simplest and at the same time the most effectual plan is to use colored screens by which the contrast between sky and clouds can be increased. The light of clouds is rich in yellow and green rays, while the blue sky emits very little yellow light. By placing a screen in front of the lens so that the yellow and green rays are transmitted while the blue rays are stopped, the desired effect can be obtained. This necessitates a long exposure since the yellow and green rays exercise very low actinic

action on the ordinary plate; but the rapid changes of form and the movements of clouds preclude the possibility of employing long exposures. This difficulty however has been overcome by the manufacture of orthochromatic plates which are sensitive to yellow and green rays. The simplest screen would be a bit of yellow glass if that be procurable of the proper depth, most yellow glass however being quite unsuitable. A very dark tinted glass may be used when the clouds are faint and the sky not very blue, a clearer glass being used for bright clouds showing boldly on a background of bright blue sky.

Mr. R. Ll. Jones invited the attention of the members to the photographs as well as the subject-matter in Professor Worthington's little book, "The Splash of a Drop." The volume is a reprint of a discourse delivered before the Royal Institution of Great Britain, and in it is traced step by step the changes of form which a drop of liquid undergoes when it strikes a hard surface a liquid surface and the splash accompanying it, and the changes in the splash produced when a solid sphere strikes a liquid surface. The first portion is devoted to a description of the electrical apparatus by means of which the splash may be viewed at any desired stage. Next follows a series of drawings of the successive stages of the splashes made by means of the instantaneous illumination obtained by the apparatus described. In this method of following the changes the author remarks that a good deal is left to the judgment of the observer. Recently, however, photographs have been obtained. The plates used were Thomas' Cyclist Plates, and the developer Eikonogen of triple strength, in which the plates were allowed to soak for 40 minutes, the development being carried out in complete darkness. Considering how short a time the illumination must last in order to get a well defined picture, the photographs shown were regarded as a striking testimony to the sensitiveness of the plate as well as to the skill of the experimenter.

Mr. Phipps sent for exhibition to members, and Dr. VanGeyzel showed through the stereoscope, a drawing, copied from *Engineering*, of a SPHERICAL CATENARY, that is the curve formed by a chain hanging on a sphere. In the particular case shown the chain was looped and supposed to be resting on a smooth sphere. It illustrates a very interesting piece of mathematical work recently done by Professor H. G. Greenhill, F.R.S. From the photographer's point of view the interest was simply that of the stereoscopic representation. One interesting feature from this point of view arose from certain imperfections in the drawing which though imperceptible to the unaided eye became glaring faults when seen through the stereoscope. Mr. Michie Smith pointed out that in exactly the same way the stereoscope becomes valuable in examining stellar photographs when hunting for minor planets. Two photographs are taken of the same region at intervals of, say, one or two hours. These are then placed side by side and examined in a stereoscope. The stars not having moved still appear as spots, but if any planet be present on the two plates its change of position will produce the stereoscopic effect and it will stand out from the plate like a solid body.

A vote of thanks to the Chairman terminated the proceedings.

CORRESPONDENCE.

TO THE EDITORS

of the Journal of the Amateur Photographic Society of Madras.

Stereoscopic Photography at the Next Competition.

SIRS,—The revival of Stereoscopic Photography [illegible] not seem to have animated the Madras Amateur with [illegible] zeal to strike out in that line. Perhaps I should have said that I have not heard of our members (with one or two exceptions) doing any stereoscopic work. Don't you therefore think that, in addition to the prescribed subject for the next half-yearly competition, a special award might be offered to members, who might thereby be incited to send in stereoscopic transparencies or prints?

I am, yours faithfully,

3rd April, 1896. A MEMBER.

[Members are at liberty to send in stereoscopic prints or transparencies for competition without special notice, since Rule 6 of the Society's Competition Rules permits the judges to make special awards for "excellence in any other branch of photography" as well as in those specified in the rule.—*Eds.*]

TO THE EDITORS OF THE JOURNAL.

SIRS,—I want to ask if it is not possible, by using a single lens camera, to take a stereoscopic picture, so that the negative can be printed from, without cutting it.

Yours faithfully,

30th March, 1896. STEREO.

[A method of doing this was abstracted into the Journal, see page 37 of issue for February 8th, 1895.—*Eds.*]

EXTRACTS.

Points of View—Some Suggestions on Selection of Subject.

By Leslie Selby.

Some short time back I had the honour of submitting for your approval a few of my views on the subject of "What to Take and How to Take It," feeling that perhaps my few experiences might be of use to some of the beginners who were doubtless induced to commence photography by reading the valuable papers in the Amateur Photographer. I venture to continue the subject from another point of view, owing to the letter that appeared in this journal, shortly after the publication of my article, from a gentleman who, in apparently referring to it, says that amateurs know perfectly well "how to take," but are more interested in finding "what to take."

When I commenced that paper I had headed it simply "What to Take," but after writing it, it appeared to me that the method of taking was, if possible, of more importance than the mere subject alone, and if this gentleman will kindly do me the honour of reading this present article, I trust he will allow that we are looking at the question from different points of view. When I ventured to offer my opinions of how to take photographs to photographers, I was not thinking, as the correspondent appeared to think, of the merely chemical part of the subject, as, on re-reading it, he will, I trust, discover, but rather as to how, by diffusion of focus, and the taking advantage of atmospheric effects, a mere topographical subject might be photographed into a work of art. The mere view itself is, in my mind, of very little importance, compared to the after rendering of it, and if atmosphere is not to be had at the time of taking, I think that by the after-method of focussing and printing this valuable adjunct to the pictorial rendering of our works is of the very greatest importance. Take, for instance, the view of Richmond, that was kindly reproduced for me by the Editor of this journal, some short time back, and, if I may be allowed to say so, considering the nature of the subject, so well reproduced.

In teaching the amateur to take pictures, am I simply to tell him to go to Richmond and put up his camera and he will get one? [illegible]uld he not rather be told how to take it, and when and from [illegible] point of view? And would not a little instruction on the [illegible]r of focussing and the placing the picture so as to appear to [illegible] best advantage, and also as to what time of day it looks at its best? If I simply tell him what to take he would justly reply that the columns of his paper might be employed to better purpose, but the student who is desirous of taking *pictures* may possibly gain a few hints, even from my imperfect instructions. We have had some excellent little works from an eminent photographer on the art rules of picture-making, but the difficulty is in the application of them. Diagonal lines and pyramidal forms seem simple enough when sketched in a book, but when seen in nature, unless the eye has been trained to see them, they may very possibly be missed.

Or, on the other hand, we may be so tied down by the rules of composition that, for fear lest we should err against them, we pass over many a view that is well worthy of our attention. Learn as many rules as possible at first, but do not always be thinking of them when at work, any more than, when writing, you should be always thinking of grammatical rules—when once learned they will come naturally. How often does one see a view when walking or driving which immediately strikes the eye and engages the attention and makes the photographer wish for his apparatus. The next time you see such a view, stop, if possible, and examine it, and you will probably find that the composition of the picture is perfect or that some particular effect of light and shade has attracted the eye. If it is a view that always attracts one's attention, it is probably due to the former, but if it is only apparent on certain occasions, it is more likely to be the latter.

To those of my readers who do not understand this, I would illustrate the remark from my own personal experience. Before starting photography I had not studied art, and had no wish to, and was of opinion that clear and brilliant days were the only ones when life was worth living. But even in those days of ignorance two views always attracted my eye and excited my admiration whenever seen, either morning, noon, or evening, and almost tempted me into learning to sketch. One was the view of Richmond as seen from the railway bridge, and the other was likewise seen from the train when crossing the river at Kew, whence delightful Strand-on-the-Green is seen to perfection. What, then, is it that arrests the attention even of the inartistic eye in these views? Many other views that seem to me now equally lovely would then have been passed by with but a casual glance, and probably if I had my attention directed to them should have merely remarked that it was *rather* pretty. I take it that the composition or the colouring in these views is so perfect that they act somehow on our dormant faculties, and are of promise as showing that somewhere, hidden away, we have some artistic perception that with a little assistance and guidance may, at length, lead us into some artistic career.

These particular views, then, arresting our attention naturally the photographer will make an opportunity of going there with his apparatus to reproduce them. The question of point of view must then seriously engage his attention, as the particular place from which he saw it (on the bridge) will not be available, and, even if it were, he would still require to know something as to "How to take it," as much would depend on the focus of his lens and the size of his camera. I do not think I shall be far from the truth in stating that the average quarter-plate camera is used with a lens of a focus varying between five and seven inches. Taking six inches as an average, what would the view look like on the screen? A large expanse of water in the foreground, and the wished-for view of exceedingly liliputian proportions. The worker must then get nearer to his subject, or in other words must alter his view-point, when possibly the whole scene will be altered by some addition here or substraction there. Would not some little instruction be useful to the beginner here as to how to take it, and from what point of view? He might be unaware of the fact that by the use of a long-focus lens perhaps half his difficulty would be avoided, or that by the help of a telephoto lens he might obtain the scene in the exact proportions apparent to the eye. Or he might be unaware of the fact that it is perfectly easy, if he has only the one lens, to take the view on a half-plate, and afterwards make a quarter-plate or even less out of it, and so obtain what he requires. He might wish to accentuate his foreground or some particular portion of his view, and the teacher might here lend a helping hand to the aspirant with great advantage. Many a time have I wished for the loan of this assistance in my earlier photographic days, and now I always find some hint or other to turn to account in the numerous excellent papers appearing in this journal.

The fear is lest the beginner should trust too much to outside aid, and so find himself unable to work unaided. Copying is very good for the learner up to a certain point, but the earnest worker must learn to choose his own points of view, and, though they may differ from other workers, they need not necessarily be inferior. In fact, the views of a certain subject taken by two photographers from different standpoints with different lenses, may possibly be identical, but when they do differ, a great deal may be learnt by comparing the resulting prints and finding out the advantage of the one point of view over the other. Unknowingly how often this subject of points of view engages our attention when, on examining our prints, we come to the conclusion that if we had moved the camera a little more this way or that, had left out this or added that, we might have considerably improved them. And in teaching the learner how to choose his point of view, I take it we are really showing him how to take his picture.

What are the chief considerations to be taken into account in choosing the point of view? Firstly, the lighting of the subject is all-important, so that the motive of the picture may be the most prominent feature in it and all other parts accordingly subdued. The position of the chief object is of importance, and also the shape of the picture, and whether horizontal or vertical, and then the after-process of trimming. And it is in the cutting away of portions of our prints that great care should be used, as by the judicious use of the trimming knife great prominence may be given to particular objects). By cutting down large portions of the sky we give an appearance of height to distant mountains that are otherwise dwarfed, and by trimming down the foreground we may often apparently bring distant objects to the front. All these points, I take it, are of importance in the matter of points of view, and by covering up portions of the picture on the ground-glass we shall take the view with the determination of improving it by after trimming. The height of the camera will have great effect on the picture, and by lowering or raising it we may accentuate the foreground or dispose of unnecessary patches of uninteresting matter. Especially is this the case in river scenery, where our endeavour is possibly to form a strong foreground of the reeds and rushes that grow there or make use of the long stretches of mud which are reproduced so well by the black and white printing processes and where the blank stretches of waste water are required in a subdued manner. Such scenes as these are so often spoilt by being taken from too high a point of view, where the water resembles a ploughed field or remains a staring blank white. To me, too, a stretch of water without anything to lead the eye into the view and give perspective, too often gives it the appearance of a wall,

and I always carefully trim off as much as possible, so bringing the boat, which may have been in the mid-distance originally, into the foreground and destroying the wall-like appearance. I noticed at the last Pall Mall Exhibition this same effect, and felt quite annoyed to think that the use of the shears was unknown to the exhibitors, or, at any rate, unused by them. But, of course, it is only a matter of opinion and only shows the different points of view from which the different workers compose their works.

Another point of view is in the finishing off of our prints, and as to their final shape. Square and round prints are generally forbidden by the rules of custom, if not of art; but there are exceptions to this rule. An upright, oblong picture will bear being very nearly square with advantage, whereas when turned round it will look quite square, an optical illusion that may become of service to the observant worker. A shape I am myself particularly partial to is of the proportion of, say, 7 by 2, especially for pictures of a flat country, and when a low point of view is chosen. It is also very useful for pictures taken to represent misty weather, when a pronounced sky would be out of place, and the unused space is better dispensed with. Look at the picture of "A Dredger," reproduced last January, where the shape I referred to was used, and the three extra inches of sky would have quite spoiled the effect.

The sky must naturally concern us very much in the choosing of our point of view, unless we always make a rule of printing one in. Unfortunately, by this method one is apt to repeat the same sky too often, and necessarily so, unless one has a large stock of sky negatives, and even then it is often difficult to find one to just fit the subject. It must be lighted in the same way as the view was, and must also suit its composition; must not be too heavy for the landscape, nor give the appearance of bright sunlight when the picture is apparently a representation of rain or mist. Far better, when possible, for the beginner to obtain his sky on the same plate as the negative, not only from an economical point of view, but also as a safe means of eluding the carping comments of captious critics.

Shall the student take notice of the remarks made on his works by these gentlemen, or will it be better to stand by his own opinion, may be the question asked by a beginner. My reply would be that it is advisable to make use of every advantage of possible opportunities offered to the learner, and under this heading I should place these criticisms. Some are depressed by adverse judgments, others over-elated by too much approval, but the true artist will steer a middle course and always feel that he has yet much to learn and a determination to learn it. By steady plodding in the face of adverse criticism, one is more likely to gain the goal than by the self-satisfaction engendered by a too early success, perchance the result of a lucky fluke. Read the remarks that are made on your works, and should you feel them to be true, resolve in future to work from a different point of view, but should you, on the other hand, feel them to be false, take no notice, but put them down to the ignorance of on inartistic ignoramus. Remember that the critique is merely the opinion of one man, and that your artistic perceptions may be quite as keen as his, though, on the other hand, you may possibly have been over-pleased with your labours, and so have overlooked some faults. A steady perusal of *all* the critiques should give you a fair idea of your true progress, and a study of your prints with the help of these comments should be a useful lesson. A case in point, though rather in my favour, occurred to me not long since. I exhibited at a London local exhibition the abovementioned picture of a dredger, and it was described in one of the papers as a 7 by 2 strip of Lodnon fog, but as I still thought there was something in it, I sent it to the Salon and had the pleasure of seeing it hung there, and was afterwards requested to loan it for the Brussels Exhibition.

I trust I have now shown that "How to Take it" is of equal importance with the question of "What to Take," but any further remarks on the latter question must, I fear, be held over for another paper, or the Editor will be down upon me for occupying too much his space. I can only trust that my correspondent will see, on cond thoughts, that we were considering the subject from different points of view," and that the taking a photograph is not simply a emical process any more than the after-development and printing. In all three the artist will show the finer results, and will bring his art-training to bear, and so perchance make of an apparently topographical view a picture, and of an apparently trivial scene a work of art. To help in the attainment of this result must be my excuse for occupying the valuable columns of the *A. P.*, and for thrusting upon your notice my ideas of the necessity of choosing a picturesque "point of view."—*The Amateur Photographer.*

Which is the Best Process for Making Lantern Slides?

By Duncan Moore.

Till a comparatively recent date the wet collodion process was considered unapproachable for lantern slides, and even now, where slides are manufactured in large quantities for the wholesale trade, wet collodion is almost universally adopted. However, the time will probably come when the newer gelatine plates will be substituted for it. There is much to be said in favour of wet collodion for this work when the demand is considerable. Wet collodion provides a transparency clear and thin, brilliant and full of detail, with very little trouble, comparatively. As to the matter of expense which necessarily has considerable influence when large quantities have to be dealt with it is undoubtedly the cheapest process, especially now that silver has become so depreciated in value. We can hardly take the ordinary commercial lantern plate as a specimen of what wet collodion can produce in the matter of quality, as the best samples of commercial work are much inferior to specially prepared ones in the quality of richness.

The wet collodion image can be very much varied in this respect by modification of the developer, much more than a gelatine plate can, as the image is formed by the deposition of reduced silver, and the developer that will reduce the metal to the finest possible state of division will produce the best quality of slide. On the contrary in a gelatine plate the silver exists in a state of chloride or bromide, and the function of the developer is not to deposit fresh silver, but to change these haloids into a metallic state, the consequence is, the fineness of the deposit is more or less dependent on the haloids in the plate than on the developer. We know a very rapid bromide plate produces a somewhat coarse image, whilst a slow chloride one has the particles of silver salt in an extremely fine state of division; this being so, lantern plates are usually chloride ones. At the same time there is no doubt the kind of developer influences the quality of the image in gelatine films by modifying the arrangment of the particles of the silver salts into large or smaller collections; as a proof of this we can compare a plate developed with ferrous oxalate with one developed by pyro soda, although both may appear excellent as transparencies there will be a decidedly better quali[illegible] of image on the screen from the pyro soda developed slide than the ferrous oxalate one.

If the plate itself was the only factor in the result, both s[illegible] be alike in this particular respect, but as they are not we are dri[illegible] to the conclusion that development has some influence in this matter, but very much less than it has on the wet collodion image, which is almost entirely under the control of the developer. Were it not for the colour, a pyrogallic acid developed wet plate would produce a deposit of silver so fine that it is scarcely like a deposit, more of the nature of a stain. Unfortunately for this process a slide must possess a pleasant colour in addition to other good qualities, and the pyrogallic acid colour is a purplish inky tint, not pleasant to look upon in large masses as revealed on the screen. It has been found that a weak iron developer, strongly acid and combined with albumen, will produce an image on wet collodion of exceptionally fine quality, and also of a pleasant warm colour very suitable for lantern slides. At one time glycocine was added in small quantities to the developer with particularly happy results, it had the effect of slowing the development but not the exposure, with the result that the silver by slow deposition was in an extremely fine state of division, and the quality of the image much improved. The clearness of the shadows, perhaps as much as anything, has tended to keep wet collodion in the foreground for this class of photography; for rapidity of production it is superior to gelatine. Once the apparatus fixed for copying, a camera is almost a necessity with wet-films; a slide can be exposed, developed, fixed and finished in ten minutes, possibly in less when in the regular swing of work, and a number are dried on the stove together. There is no waiting with wet collodion, they are developed in a minute or two and fixed in as short a time, a good swill under the tap and the washing is complete, and they can be quickly dried by artificial heat.

With a gelatine plate the development and drying are both rather tedious processes, the drying especially, unless submitted to a previous soaking in spirit of wine to abstract the greater part of the water, but except in cases of emergency the plates are left to dry spontaneously. Of course, rapidity of production has to be considered when large numbers are required, but, for private consumption, so to say, this is not important; it is more a question of which process will produce the best slide regardless of trouble or expense, which when only a few slides are wanted are negligible quantities. We have said what excellent qualities the best wet collodion slides

possess, but undoubtedly to make them entails a great deal of mess that the majority of amateur photographers would not willingly incur.

Good modern gelatine lantern plates are not to be despised, and most beautiful work may be done with them; the chief difficulty, that of clear shadows, is now almost non-existent if the different manipulations are carried out properly. Perhaps the very finest results possible in this direction are obtained by an almost, if not quite, obsolete process—that of the collodio-albumen; the delicacy, richness and charming colours obtainable by this method are beyond all praise, but, unfortunately, it is a difficult and elaborate process, requiring considerable experience to ensure success, and therefore not easily available. Albumen in some form or another seems to conduce to the best results in transparency work, whether used alone in combination with collodion or in the developer.

Another process, that of the collodio-bromide dry plate process, is by many considered to lead the van for the production of transparencies; it is somewhat slow, but easily worked, and the results are exceedingly satisfactory. At the present time several well-known amateurs adopt this plan in preference to all others; its speciality is a remarkable clearness and delicacy of image, and susceptible of giving pleasant colours. Like all collodion surfaces care is required in handling. The plates are easily prepared, and can be used either wet or dry without any apparent difference in the resulting image. Those who like to prepare their own plates I would strongly recommend to give this process a trial; I feel sure their trouble would be amply rewarded.

The different processes enumerated are undoubtedly the best for lantern slides, but, given a clean working plate of any kind not specially intended for this work, judicious exposure and development will produce a good slide.—*The Optical Magic Lantern Journal and Photographic Enlarger.*

List of Members whose Dark Rooms are available for use by Members of the Madras Amateur Photographic Society.

[illegible] L. VanGeyzel, Dare's Gardens, Chetput.
[illegible] Walker, Holloway's Gardens, Pantheon Road.
[illegible] S. Nagaratnam, 47, Malayappen Street, Black Town.
[illegible] Chatterton, College of Engineering, Chepauk.
W. H. Oakes, Anderson's Road, Nungumbaukum.
Surg.-Col. P. H. Benson, Mysore.

SALE AND EXCHANGE.

NOTICE.—Members of the Madras Amateur Photographic Society are permitted to use this column free of charge for two insertions of each advertisement—all subsequent insertions of the same being chargeable at 2 annas a line. When an advertisement becomes liable to this charge, it will not be inserted unless a postal order or stamps to the value of the charge are previously sent, addressed to Graves, Cookson and Co., Scottish Press, Mount Road Branch, Madras. Advertisements received up to the 5th of each month will be inserted in the next issue of the Journal; those received after this date will be held over for the subsequent issue.

Subscribers, and others who are not regular dealers, may make use of this column for advertisements by paying at the rate of 3 annas a line.

For Sale.—20 Volumes, 3 to 22, 1886 to 1895 inclusive, unbound, of "The Amateur Photographer"; these contain a variety of useful information for amateurs.

Offers wanted by E. W. Stoney, M. Inst. C.E., Podanur, Coimatore District.

Wanted—The Year-Book of Photography for 1890, in good condition.

Apply, stating price, to J. H. Stoddart, Belgaum.

For Sale.—The improved "Newman" Shutter, with pneumatic regulation and release, working in diaphragm slot and permitting both time and instantaneous exposures up to $\frac{1}{64}$th of a second, was specially constructed for owner, and speeds were carefully tested. With three spare extra thin steel diaphragms and attachment to fit a Ross' Rapid Symmetrical Lens for $\frac{1}{4}$ plate. Owner selling, as no use for it. Cost in London 37 shillings. Offers received by Surgeon-Major VanGeyzel, Chetput, Madras.

For Sale.—An old wet plate and well seasoned 12 × 10 Mahogany Camera by Dallmeyer; bellows body, altered to the modern pattern with reversing back, horizontal and vertical movements, and 3 double dark slides (teak), all brass bound, by J. Blees of Jabbalpore in 1895 in good order, including a folding tripod stand and leather case with lock and key. Price Rs. 300.

A Studio Tent, 24′ × 11′, height 14′ at window side, and 8′ the opposite. Price Rs. 100.

A Dark Tent, 8′ square and 8′ high. Price Rs. 60.

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N.B.—The Journal is issued on the 15th of each month, and is posted free to members of the Madras Amateur Photographic Society.

All communications connected with the issue of the Journal should be addressed to Messrs. Graves, Cookson & Co., Mount Road, Madras; and letters for the Editors should be addressed to them, care of the Honorary Secretary of the Society, Teynampett, Madras.

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No, we have not given up making Lantern Slides. The fact is we could'nt get enough plates to execute orders. However we have plenty on the way—Thomas's, Hill Norris, Beernaert Print Out and Bromide Plates.

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